



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,148	12/15/2000	Marian Rudolf	200865US2	8411
22850	7590	05/21/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LAM, DANIEL K	
		ART UNIT	PAPER NUMBER	
		2667	/	
DATE MAILED: 05/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/736,148	RUDOLF ET AL.
Examiner	Art Unit	
Daniel K Lam	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 December 2000.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-12 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 21 February 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. 5.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____ .

DETAILED ACTION

Drawings

1. Figures 5 to 7 are objected to as failing to comply with 37 CFR 1.84 because descriptive labels that is necessary for understanding the drawings, are missing.
2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Specification

3. The abstract of the disclosure is objected to because the form and legal phraseology often used in patent claims, such as "said," should be avoided. Furthermore, the abstract should be in narrative form and generally limited to a **single** paragraph on a separate sheet within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities:
 - On page 7, line 21, "(711)" should be "(710)" as shown in figure 7.Appropriate correction is required.

Claim Objections

5. **Claim 11** is objected to because it contains the phrase "for example" which renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
7. **Claims 1-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 4,979,168 issued to Courtois et al (hereinafter Courtois) in view U. S. Pat. No. 6,529,520 issued to Lee et al (hereinafter Lee).

Regarding **claim 1**, Courtois discloses a method of dynamic random access by users to a shared resource according to CSMA that is originated from ALOHA, comprising:
 - If the shared resource is sensed idle, the user transmits the data packet. If the shared resource is sensed busy, the user reschedules the transmission of the data packet to some later time according to some delay distribution so as to avoid collision among different contending users by randomizing the next transmission point. At the new point in time, the user senses the channel and repeats the algorithm (the instant of transmission of a data packet by the user being supplied by at least one random variable in which certain time ranges of access to the resource, characterized in that said random variable is temporarily modified into a random variable of the same mean and greater variance when transmission at said instant would result in a breach of the booking). See col. 5, lines 44-50.

However, Courtois does not explicitly disclose that the resource has been the object of a prior booking. But Lee discloses a multiple access communication network with combined contention, M slots, and reservation, W slots. The reservation W slots are subject of prior booking by the user. See figure 3, and col. 15, lines 19-21. Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to operate the shared resource using both contention and reservation ALOHA type of access technologies such that when the resource is the object of a prior booking, a random variable is generated according to the same means and with greater variance for a key reason. Since the contention network, such as ALOHA network, with appropriate backoff algorithm can support a large number of bursty users and the contention free network, such as TDMA network, provides high bandwidth to small number of users, therefore, combining both approaches, a large population of bursty users with long messages can be supported as taught by Lee. See col. 2, lines 46-50.

Regarding **claim 2**, in addition to disclose the limitations in claim 1 discussed earlier, Courtois further discloses the user senses the resource to see if it is busy or idle. If it is busy, the user reschedules the transmission of the data packet to some later time according to some delay distribution (a booking breach is established when the transmission instant of the data packet falls within a booked time range). Also see col. 5, lines 44-50.

Regarding **claim 3**, in addition to disclose the limitations in claim 2 discussed earlier, Lee further discloses, if the secondary station whose request for transmission is not acknowledged, it is required to backoff for some time before retransmitting the

request (a booking breach is also established when the acknowledgement of the data packet is expected within a booked time range). See col. 6, lines 39-42.

Regarding **claim 4**, in addition to disclose the limitations in claim 2 or 3 discussed earlier, Courtois further discloses in the slotted ALOHA network, the slots are equal to the packet transmission time (the ALOHA protocol is a discrete ALOHA protocol and the booked time ranges are transmission intervals). See col. 2, lines 8-11.

Regarding **claims 5, 6, 8 and 9**, in addition to disclose the limitations in one of claim 1 to 4 and one of claim 5 to 7 discussed earlier, Courtois further discloses, if the shared resource is sensed busy, then the user reschedules the transmission of the data packet to some later time according to some delay distribution so as to avoid collision among different contending users by randomizing the next transmission point (A first random variable modified into a random variable of the same mean and greater variance when transmission at the first instant would result in a breach of the booking; claim 5.

The step of modifying the first random variable consists in adding to it a balanced random variable; claim 6. A second random variable modified into a random variable of the same mean and greater variance when transmission at the second instant would result in a breach of the booking; claim 8. The step of modifying the second random variable consists in adding to it a balanced random variable; claim 9). Also see col. 5, lines 44-50.

Regarding **claims 7 and 10**, in addition to disclose the limitations in claims 6 and 9 discussed earlier, Courtois further discloses, if the shared resource is sensed busy, then the user reschedules the transmission of the data packet to some later time according to some delay distribution so as to avoid collision among different contending users by

randomizing the next transmission point. At the new point in time, the user senses the channel and repeats the algorithm (If the transmission instant supplied by the first random variable as modified is in breach of the booking, the step of adding the balanced random variable is iterated until the transmission instant supplied by the first random variable is compatible with the booking; claim 7. If the transmission instant supplied by the second random variable as modified is in breach of the booking, the step of adding the balanced random variable is iterated until the transmission instant supplied by the second random variable is compatible with the booking). Also see col. 5, lines 44-50.

Regarding **claim 11**, in addition to disclose the limitations in one of the preceding claims discussed earlier, Courtois further discloses a station measuring the scheduled time interval, TS, after sensing the channel is busy (the user carries out a measurement in at least one of the booked time ranges). See col. 12, lines 59-61.

Regarding **claim 12**, in addition to disclose the limitations in one of the preceding claims discussed earlier, Courtois further discloses the users are mobile stations, 10, 12, 14, and 16 (the user is a mobile station). See figure 1, and col. 5, lines 30-31.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K. Lam whose telephone number is (703) 305-8605. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status Information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKL: *dkl*
May 14, 2004

Chi Pham
CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
5/17/04